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ABSTRACT

This digest, based on "Survey of Instructional Development Models," 3rd edition, defines instructional development (ID) in terms of four major activities: analysis of the setting and learner needs; design of a set of specifications for an effective, efficient, and relevant learner environment; development of all learner and management materials; and evaluation of the results of the development both formatively and summatively. A taxonomy of ID models can help clarify the underlying assumptions of each model, and help identify the conditions under which each might be most appropriately applied. The taxonomy has three categories indicating whether the model is best applied for developing: individual classroom instruction; products for implementation by users other than the developers; or large and complex instructional systems directed at an organization's problems or goals. Numerous ID models are mentioned for each of the three categories in the taxonomy. Gustafson and Branch suggest that developers need to acquire a working knowledge of several instructional development models, and ensure that all three categories in their taxonomy are represented in that knowledge. They believe that all the instructional development models they discussed will survive well into the next century, and will be able to accommodate new developments in theory and technology. (Contains 14 references.) (SWC)

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Survey of Instructional Development Models

An ERIC Digest.

by Eric Plotnick

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ERIC DIGEST

September 1997 EDO-IR-97-07

Survey of Instructional Development Models

by Eric Plotnick

This Digest is based on Survey of Instructional Development Models, Third Edition by Kent L. Gustafson & Robert M. Branch

Definition of Instructional Development

In *Survey of Instructional Development Models, Third Edition,* Gustafson & Branch (1997) define instructional development (ID) in terms of four major activities.

- Analysis of the setting and learner needs;
- Design of a set of specifications for an effective, efficient, and relevant learner environment;
- Development of all learner and management materials; and
- Evaluation of the results of the development both formatively and summatively.

A Taxonomy of ID Models

A taxonomy of ID models can help clarify the underlying assumptions of each model, and help identify the conditions under which each might be most appropriately applied. Gustafson's (1981, 1991) schema contains three categories into which models can be placed. Placement of any model in one of the categories is based on the set of assumptions that its creator has made, often implicitly, about the conditions under which both the development and delivery of instruction will occur. The taxonomy has three categories indicating whether the model is best applied for developing: individual classroom instruction; products for implementation by users other than the developers; or large and complex instructional systems directed at an organization's problems or goals.

I. Classroom Orientation ID Models

Classroom ID models are of interest primarily to professional teachers who accept as a given that their role is to teach, and that their students require some form of instruction. Teaching personnel usually view an ID model as a general road map to follow. Typically, a classroom ID model outlines only a few functions, and simply provides a guide for the teacher. The developer who works with teachers would do well to employ any ID model with caution because teachers are not likely to be familiar with the concepts or processes of systematic instructional development.

Gustafson & Branch select and discuss four models to represent the variety of ID models most applicable in the classroom environment:

- Gerlach and Ely (1980). Teaching and media: A systematic approach.
- Kemp, Morrison and Ross (1994). Designing effective instruction.
- Heinich, Molenda, Russell and Smaldino (1996). ASSURE.
- Reiser and Dick (1996). Instructional planning: A guide for teachers.

II. Product Orientation ID Models

Product development models typically assume that the amount of product to be developed will be several hours, or perhaps several days, in length. The amount of front-end analysis for product oriented models may vary widely, but it is usually assumed that a technically sophisticated product will be produced. Users may have no contact with the developers. Product development models are characterized by four key features:

- Assumption that an instructional product is needed.
- Assumption that something needs to be produced, rather than selected or modified from existing materials.
- Considerable emphasis is placed on tryout and revision.
- Assumption that the product must be usable by a variety of managers of instruction.

Gustafson & Branch select and discuss three models to represent the variety of ID models that have a product orientation:

- Van Patten (1989). What is instructional design?
- Leshin, Pollock and Reigeluth (1990). Instructional design: Strategies and tactics for improving learning and performance.
- Bergman and Moore (1990). Managing interactive video/multimedia projects.

III. System Orientation ID Models

System oriented ID models typically assume that a large amount of instruction, such as an entire course or entire curriculum, will be developed, and that substantial resources will be made available to a team of highly trained developers. Assumptions as to whether original production or selection of materials will occur vary, but in many cases original development is specified. Assumptions about the technological sophistication of the delivery system vary, with trainers often opting for more technology than classroom teachers. The amount of front-end analysis is usually high, as is the amount of tryout and revision. Dissemination is usually quite wide, and typically does not involve the team that did the development.

Systems oriented ID models usually begin with a data collection phase to determine the feasibility and desirability of developing an instructional solution to a "problem." Systems models, as a class, differ from product development models in the amount of emphasis placed on analysis of the larger environment before committing to development. Systems models also typically assume a larger scope of effort than product development models. However, in the design, development, and evaluation phases, the primary difference between systems models and product models is one of magnitude, rather than type of specific tasks to be performed.

Gustafson & Branch select and discuss six models to represent the variety of ID models most applicable in the systems environment:

- Instructional Development Institute (IDI) (National Special Media Institute, 1971). IDI model.
- Branson, (1975). Interservices Procedures for Instructional Systems Development (IPISD) .
- Diamond (1989, 1997). Designing and improving courses and curricula: A practical guide.
- Smith and Ragan (1993). Instructional design.
- Gentry (1994). Introduction to instructional development process and technique.
- Dick and Carey (1996). The systematic design of instruction.

Conclusions

Gustafson & Branch suggest that developers need to acquire a working knowledge of several instructional development models, and ensure that all three categories in their taxonomy are represented in that knowledge. As new and different models are encountered, the new models can then be compared to those with which the developers are familiar. Gustafson & Branch also suggest that developers maintain a repertoire of examples of ID models that can be presented to clients along with varying levels of detail. Such a repertoire will allow developers to introduce the ID process to uninformed clients easily. Developers should always be in the position of selecting an appropriate model to fit a situation, rather than forcing the situation to fit a model.

There has been little substantive change in the general conceptual framework of ID models in recent years that suggest any trend. While some recent models (e.g. Bergman & Moore, 1990) focus on new delivery systems, these models do not represent new conceptions of the ID process. The only safe forecast based on the past would be that little change is likely to occur in the next few years. Gustafson & Branch believe that all the instructional development models they reviewed and discussed will survive well into the next century, and will be able to accommodate new developments in theory and technology.

References

Bergman, R., & Moore, T. (1990). *Managing interactive video/multimedia projects.* Englewood Cliffs, NJ: Educational Technology Publications.

Branson, R. K. (1975). Interservice procedures for instructional systems development: Executive summary and model. Tallahassee, FL: Center for Educational Technology, Florida State University. (National Technical Information Service, 5285 Port Royal Rd., Springfield, VA 22161. Document Nos. AD-A019 486 to AD-A019 490)

Diamond, R. M. (1989). *Designing and improving courses and curricula in higher education.* San Francisco, CA: Jossey-Bass. (ED 304 056)

Diamond, R. M. (1997). *Designing and assessing courses and curricula: A practical guide.* San Francisco, CA: Jossey-Bass. In press.

Dick, W. (1996). The Dick and Carey model: Will it survive the decade? *Educational Technology Research and Development, 44*(3), 55-63. (EJ 532 854)

Gentry, C. G. (1994). *Introduction to instructional development: Process and technique.* Belmont, CA: Wadsworth Publishing Company.

Gerlach, V. S., & Ely, D. P. (1980). *Teaching and media: A systematic approach (2nd ed.).* Englewood Cliffs, NJ: Prentice-Hall Incorporated.

Heinich, R., Molenda, M., Russell, J., & Smaldino, S. (1996). *Instructional media and technologies for learning (5th ed.).* New York: Macmillan.

Kemp, J. E., Morrison, G. R., & Ross, S. M. (1994). *Designing effective instruction.* New York: Merrill.

Leshin, C., Pollock, J., & Reigeluth, C. (1992). *Instructional design: Strategies and tactics for improving learning and performance.* Englewood Cliffs, NJ: Educational Technology Publications.

National Special Media Institute. (1971). *What is an IDI?* East Lansing, MI: Michigan State University

Reiser, R., & Dick, W. (1996). *Instructional planning: A guide for teachers (2nd ed.).* Boston: Allyn and Bacon.

Smith, P. L., & Ragan, T. J. (1993). *Instructional design.* New York: Macmillan.

Van Patten, J. (1989). What is instructional design? In K. A. Johnson & L. K. Foa (Eds.), *Instructional design: New alternatives for effective education and training.* New York: Macmillan.

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